

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

22. (currently amended) A nerve guide conduit comprising a gene delivery system and a poly(phosphoester) polymer in the shape of a tube having a diameter, a first end, a second end, and a wall having an outer surface and a luminal surface.

23. (cancelled).

24. (original) The nerve guide conduit of Claim 22, wherein the polymer has an average molecular weight of between 10,000 and 25,000.

25. (original) The nerve guide conduit of Claim 24, wherein the polymer has an average molecular weight of between 14,900 and 18,900.

26. (original) The nerve guide conduit of Claim 25, wherein the polymer has an average molecular weight of between 15,000 and 17,000.

27. (original) The nerve guide conduit of Claim 22, wherein the conduit has a surface porosity of between 2 and 58%.

28. (original) The nerve guide conduit of Claim 27, wherein the conduit has a surface porosity of 35%.

29. (original) The nerve guide conduit of Claim 27, wherein the conduit has a surface porosity of 8%.

30. (original) The nerve guide conduit of Claim 22, wherein the tube has a diameter of between 1 and 2 mm.

31. (original) The nerve guide conduit of Claim 30, wherein the diameter is 1.5 mm.

32. (previously amended) The nerve guide conduit of Claim 22, wherein the wall has a thickness of between 150 and 250 μm .

33. (previously amended) The nerve guide conduit of Claim 32, wherein the thickness is between 170 and 240 μm .

34. (original) The nerve guide conduit of Claim 22, wherein the wall comprises a plurality of layers.

35. (original) The nerve guide conduit of Claim 34 comprising at least 3 layers.

36. (previously amended) The nerve guide conduit of Claim 34, wherein each layer is between 20 and 30 μm thick

37. (previously amended) The nerve guide conduit of Claim 36, wherein each layer is 25 μm thick.

38. (original) The nerve guide conduit of Claim 22, wherein the outer surface of the wall has greater microporosity than the luminal surface of the conduit.

39. (cancelled).

40. (currently amended) The nerve guide conduit of Claim ~~39~~ 22, wherein the gene delivery system comprises a complex of DNA and a cationic polymer or lipid loaded into the conduit.

41. (original) The nerve guide conduit of Claim 40, wherein the complex is particles of 20nm in diameter.

42. (original) The nerve guide conduit of Claim 40, wherein the cationic polymer or lipid comprises polyethylenimine, poly-L-lysine, or chitosan.

43. (original) The nerve guide conduit of Claim 40, wherein the cationic polymer or lipid comprises 1,2 - dioleoyl phosphatidylethanolamine.

44. (currently amended) The nerve guide conduit of Claim 40, wherein the cationic polymer or lipid comprises ~~Transfast or GenePORTER~~ TRANSFAST or GENEPORTER.

45. (currently amended) The nerve guide conduit of any one of Claims ~~39~~ 22 or 40 to 44, wherein the gene encodes a neurotrophic protein or a neuro-active neural fibre growth eliciting molecule.

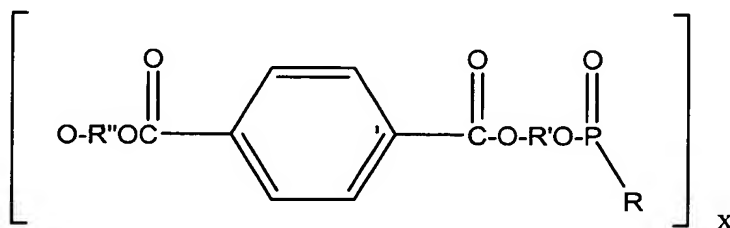
46. (original) The nerve guide conduit of Claim 45, wherein the gene comprises NGF, BDNF or Bcl-2.

47. (currently amended) ~~The nerve guide conduit of Claim 22, further~~ A nerve guide conduit comprising a sustained protein delivery system and a poly(phosphoester) polymer in the shape of a tube having a diameter, a first end, a second end, and a wall having an outer surface and a luminal surface.

48. (currently amended) The nerve guide conduit of Claim 47, wherein the sustained protein delivery system comprises one or more microspheres loaded into the conduit, wherein the microspheres contain a protein that ~~is released~~ undergoes controlled release from the microspheres ~~progressively~~.

49. (original) The nerve guide conduit of Claim 48, wherein the microspheres are made from a poly(phosphoester) polymer.

50. (previously amended) The nerve guide conduit of Claim 48, wherein the microspheres are made from a polymer comprising the subunit



wherein R' is ethyl or butyl and R and R'' are each a suitable side chain or a cross linking agent.

51. (original) The nerve guide conduit of Claim 48, wherein the microspheres are made from poly(lactic-co-glycolic acid) or poly(lactide-co-glycolide).

52. (previously amended) The nerve guide conduit of any one of Claims 48 to 51, wherein the average diameter of the microspheres is between 5 and 20 μm .

53. (previously amended) The nerve guide conduit of Claim 52, wherein the average diameter of the microspheres is 10 μm .

54. (original) The nerve guide conduit of Claim 48, wherein the microspheres release the protein over a period of at least three months.

55. (currently amended) The nerve guide conduit of Claim 48, wherein at least 100 ~~mm~~ microns of protein is loaded per 10 ~~μm mm~~ of conduit.

56. (original) The nerve guide conduit of Claim 47, wherein the sustained protein delivery system comprises NGF, BDNF, CNTF, epidermal growth factor or fibroblast growth factor.

57. (currently amended) A nerve guide conduit comprising a poly(phosphoester) polymer in the shape of a tube having a diameter, a first end, a second end, and a wall having an outer surface and a luminal surface ~~The nerve guide conduit of Claim 22~~, wherein the conduit is loaded with a bioartificial nerve graft comprising Schwann cells.

98. (new) A nerve guide conduit comprising a poly(phosphoester) polymer in the shape of a tube having a diameter, a first end, a second end, and a wall having an outer surface and a luminal surface, wherein the outer surface of the wall has greater microporosity than the luminal surface of the conduit.